

AMENDMENTS TO THE CLAIMS

1. (Original) A method of carrying out an enzyme-catalysed reaction comprising  
providing a liquid reaction medium which comprises an ionic liquid including an ion  
which comprises a functional group selected from the group consisting of alkenyl, hydroxyl,  
amino, thio, carbonyl and carboxyl groups,  
providing in the liquid reaction medium an enzyme and a substrate for the enzyme,  
and allowing reaction of the substrate to occur.
2. (Original) A method according to claim 1 in which the functional group is selected from  
the group consisting of hydroxyl, carbonyl and carboxyl groups.
3. (Original) A method according to claim 1 in which the functional group is a hydroxyl  
group.
4. (Currently amended) A method according to [any preceding] claim 1 in which the  
functional group has a labile proton.
5. (Currently amended) A method according to claim [5] 4 in which the labile proton has a  
pK<sub>a</sub> of less than 25 ~~preferably a pK<sub>a</sub> of between 10 and 20~~.
6. (Currently amended) A method according to ~~any preceding~~ claim 1 in which the ionic  
liquid comprises more than one functional group selected from the group consisting of alkenyl,  
hydroxyl, amino, thio, carbonyl and carboxyl groups.
7. (Currently amended) A method according to ~~any preceding~~ claim 1 in which the ionic  
liquid comprises either an anion and a cation or a zwitterion.
8. (Currently amended) A method according to ~~any preceding~~ claim 1 in which the ion  
comprising a functional group is a cation.
9. (Currently amended) A method according to ~~any preceding~~ claim 1 in which the enzyme  
requires a cofactor and said cofactor is provided in the liquid reaction medium.

10. (Currently amended) A method according to ~~any preceding~~ claim 1 in which the liquid reaction medium comprises less than 1.00% water, ~~preferably less than 0.25% and most preferably less than 0.10%~~.

11. (Currently amended) A method according to ~~any preceding~~ claim 1 in which the liquid reaction medium comprises at least 99.00% of the ionic liquid, ~~preferably at least 99.75% and most preferably at least 99.90%~~.

12. (Original) A method of carrying out a cofactor-dependent enzyme-catalysed reaction comprising

providing a liquid reaction medium which comprises an ionic liquid and less than 5% water,

providing in the liquid reaction medium a cofactor-dependent enzyme and the cofactor,

providing in the liquid reaction medium a substrate for the enzyme and

allowing reaction of the substrate to occur.

13. (Original) A method according to claim 12 in which the ionic liquid includes an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups.

14. (Original) A method according to claim 13 in which the functional group is a hydroxyl group.

15. (Original) A method according to claim 12 in which the ionic liquid includes an ion which comprises a functional group which has a labile proton.

16. (Currently amended) A method according to claim 15 in which the labile proton has a  $pK_a$  of less than 25, ~~preferably a  $pK_a$  of between 10 and 20~~.

17. (Currently amended) A method according to ~~any of claims 12 to 16~~ claim 12 in which the ionic liquid comprises more than one functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups.
18. (Currently amended) A method according to ~~any of claims 12 to 16~~ claim 12 in which the liquid reaction medium comprises less than 1.00% water, ~~preferably less than 0.25% and most preferably less than 0.10%~~.
19. (Currently amended) A method according to ~~any of claims 12 to 16~~ claim 12 in which the liquid reaction medium comprises at least 99.00% of the ionic liquid, ~~preferably at least 99.75% and most preferably at least 99.90%~~.
20. (Original) A composition comprising
  - an ionic liquid including an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups and
  - an enzyme.
21. (Original) A composition according to claim 20 in which the functional group is selected from the group consisting of hydroxyl, carbonyl and carboxyl groups.
22. (Original) A composition according to claim 21 in which the functional group is a hydroxyl group.
23. (Currently amended) A composition according to ~~claims 20 to 22~~ claim 20 in which the functional group has a labile proton.
24. (Currently amended) A composition according to claim 23 in which the labile proton has a  $pK_a$  of less than 25, ~~preferably a  $pK_a$  of between 10 and 20~~.
25. (Original) A composition according to ~~any of claims 20 to 25~~ claim 20 which further comprises a substrate for the enzyme.

26. (Currently amended) A composition according to ~~any of claims 20 to 26~~ claim 20 in which the enzyme requires a cofactor and the composition comprises said cofactor.

27. (Canceled)

28. (New) A method according to claim 1 in which the liquid reaction medium comprises less than 0.10% water.

29. (New) A method according to claim 12 in which the liquid reaction medium comprises less than 0.1% water.

30. (New) A method of carrying out an enzyme-catalysed reaction comprising the step of combining an enzyme with an ionic liquid that comprises an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups.